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=> d his

     (FILE 'HOME' ENTERED AT 15:50:58 ON 10 MAY 2004)

     FILE 'MEDLINE' ENTERED AT 15:51:18 ON 10 MAY 2004
L1         41442 S MICROARRAY OR ARRAY
L2         30252 S EUKARYOTIC
L3       1423069 S (GENE (3W) DELIVER? OR TRANSFECT? OR GENETIC?)
L4            55 S L1 (L) L2 (L) L3

     FILE 'MEDLINE, AGRICOLA, CANCERLIT, SCISEARCH, CAPLUS, MEDICONF' ENTERED
     AT 15:54:09 ON 10 MAY 2004
L5           166 S L4
L6            79 DUP REM L5 (87 DUPLICATES REMOVED)
L7            38 S L6 AND PY<=1999
L8            38 SORT L7 PY
L9          1302 S L1 (L) L2
L10           548 DUP REM L9 (754 DUPLICATES REMOVED)
L11           255 S L10 AND PY<=1999
L12           255 FOCUS L11 1-
L13            55 FOCUS L4 1-

     FILE 'MEDLINE' ENTERED AT 16:03:33 ON 10 MAY 2004
L14            19 S CELL MICROARRAY?

     FILE 'STNGUIDE' ENTERED AT 16:06:54 ON 10 MAY 2004

     FILE 'MEDLINE' ENTERED AT 16:09:09 ON 10 MAY 2004

     FILE 'STNGUIDE' ENTERED AT 16:09:11 ON 10 MAY 2004

     FILE 'MEDLINE, AGRICOLA, CANCERLIT, SCISEARCH, CAPLUS, MEDICONF' ENTERED
     AT 16:09:43 ON 10 MAY 2004
L15        59232 S (EUKARYOTIC OR CELL?) (L) (MICRO-ARRAY? OR MICROARRAY? OR ARR
L16         1165 S L15 AND TRANSFECTED
L17          419 S L16 AND PY<=1999
L18          419 FOCUS L17 1-
                 E  SABATINI DAVID?/AU
L19           40 S E1
L20            7 S L19 AND L1
L21            5 DUP REM L20 (2 DUPLICATES REMOVED)

=> d an ti so au ab pi l21 1-5

L21  ANSWER 1 OF 5  CAPLUS  COPYRIGHT 2004 ACS on STN
AN   2003:118509  CAPLUS
DN   138:133525
TI   Small molecule microarrays
SO   U.S. Pat. Appl. Publ., 24 pp.
     CODEN: USXXCO
IN   Sabatini, David M.; Stockwell, Brent R.
AB   Small mol. arrays, particularly small mol. microarrays
     , and methods of identifying a small mol. based on observing the effect of
     a small mol. on an observable characteristic of a biol. sample or test
     element, such as a cell, protein, cell lysate, tissue slice or small
     organism.
     PATENT NO.         KIND  DATE           APPLICATION NO.  DATE
     ---------------    ----  --------       ---------------  --------
PI   US 2003032203       A1   20030213       US 2002-189336   20020710
     WO 2003056293       A2   20030710       WO 2002-US21972  20020710
     WO 2003056293       A3   20031030
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
             PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
             UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU,
             TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
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CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

L21 ANSWER 2 OF 5 MEDLINE on STN DUPLICATE 1
AN 2002681327 MEDLINE
TI Cell-biological applications of transfected-cell **microarrays**.
SO Trends in cell biology, (2002 Oct) 12 (10) 485-8. Ref: 17
Journal code: 9200566. ISSN: 0962-8924.
AU Wu Randy Z; Bailey Steve N; **Sabatini David M**
AB Cell **microarrays** are a recent addition to the set of tools available for functional genomic studies. Each cell **microarray** is a slide with thousands of cell clusters that are each transfected with a defined DNA, which directs either the overproduction or the inhibition of a particular gene product. By using a range of detection assays, the phenotypic consequences of perturbing each gene in mammalian cells can be probed in a systematic, high-throughput fashion. Combining well-established methods for cellular investigation with the miniaturization and multiplexing capabilities of **microarrays**, cell **arrays** are a versatile tool that can be useful in many cell-biological applications.

L21 ANSWER 3 OF 5 MEDLINE on STN DUPLICATE 2
AN 2003039648 MEDLINE
TI Applications of transfected cell **microarrays** in high-throughput drug discovery.
SO Drug discovery today, (2002 Sep 15) 7 (18 Suppl) S113-8. Ref: 25
Journal code: 9604391. ISSN: 1359-6446.
AU Bailey Steve N; Wu Randy Z; **Sabatini David M**
AB DNA **microarrays** and, more recently, protein **microarrays** , have become important tools for high-throughput genomic and proteomic studies. Transfected cell **microarrays** are a complementary technique in which **array** features comprise clusters of cells overexpressing defined cDNAs. Complementary DNAs cloned in expression vectors are printed on microscope slides, which become living **arrays** after the addition of a lipid transfection reagent and adherent mammalian cells. This article discusses two potential uses of cell **microarrays** in drug discovery: as a method of screening for gene products involved in biological processes of pharmaceutical interest and as in situ protein **microarrays** for the development and assessment of leads.

L21 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:208439 CAPLUS
DN 134:247914
TI Reverse transfection method for constructing **microarrays** suitable for rapid high throughput screening of gene function in mammalian cells
SO PCT Int. Appl., 43 pp.
CODEN: PIXXD2
IN **Sabatini, David M.**
AB Described herein is a strategy for the high throughput anal. of gene function in mammalian cells. A method to create transfected cell **microarrays** that are suitable for rapidly screening large sets of cDNAs or DNA constructs for those encoding desired products or for causing cellular phenotypes of interest is described. Using a slide printed with sets of cDNAs in expression vectors, a living **microarray** of cell clusters expressing the gene products has been generated. The cell clusters can be screened for any property detectable on a surface and the identity of the responsible cDNA(s) determined form the coordinates of the cell cluster with a phenotype of interest. Accordingly, the present invention relates to a method, referred to as a reverse transfection method, in which a defined nucleic acid (a nucleic acid of known sequence or source), also referred to as a nucleic acid of interest or a nucleic acid to be introduced into cells, is introduced into cells in defined areas of a lawn of eukaryotic cells, in which it will be expressed or will itself have an effect on or interact with a cellular component or function. In the method, a mixture, defined below, comprising DNA of interest (such as cDNA or genomic DNA incorporated in an expression vector) and a carrier protein

is deposited (e.g., spotted or placed in small defined areas) onto a surface (e.g., a slide or other flat surface, such as the bottoms of wells in a multi-welled plate) in defined, discrete (distinct) locations and allowed to dry, with the result that the DNA-containing mixture is affixed to the surface in defined discrete locations. Eukaryotic cells, such as mammalian cells (e.g., human, monkey, canine, feline, bovine, or murine cells), bacterial, insect or plant cells, are plated (placed) onto the surface bearing the DNA-containing mixture in sufficient d. and under appropriate conditions for introduction/entry of the DNA into the eukaryotic cells and expression of the DNA or its interaction with cellular components. In one embodiment of the method, referred to as a "gelatin-DNA" embodiment, the DNA-containing mixture, referred to herein as a gelatin-DNA mixture, comprises DNA (e.g., DNA in an expression vector) and gelatin, which is present in an appropriate solvent, such as water or double deionized water. A second embodiment of the method is referred to as a "lipid -DNA" embodiment. In this embodiment, a DNA-containing mixture (referred to herein as a lipid-DNA mixture) which comprises DNA (e.g., DNA in an expression vector); a carrier protein (e.g., gelatin); a sugar, such as sucrose; a buffer that facilitates DNA condensation and an appropriate lipid-based transfection reagent is spotted onto a surface, such as a slide, thus producing a surface bearing the lipid-DNA mixture in defined locations. Also the subject of this invention are **arrays**, including **microarrays**, of defined DNAs spotted onto (affixed to) a surface and **array** : including **microarrays** of reverse transfected cells spotted to (affixed to) a surface by the method described herein.

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001020015	A1	20010322	WO 2000-US25457	20000918
	WO 2001020015	C2	20021003		
	W: CA, JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1218529	A1	20020703	EP 2000-963550	20000918
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
	JP 2003509060	T2	20030311	JP 2001-523786	20000918
	US 6544790	B1	20030408	US 2000-664297	20000918
	US 2002006664	A1	20020117	US 2001-817003	20010322
	WO 2002077264	A2	20021003	WO 2002-US9265	20020322
	WO 2002077264	A3	20030220		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1379642	A2	20040114	EP 2002-725351	20020322
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	US 2003228694	A1	20031211	US 2003-379130	20030304
	US 2003203486	A1	20031030	US 2003-403720	20030328
	US 2003228601	A1	20031211	US 2003-403630	20030328

L21 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:355606 CAPLUS
DN 136:49013
TI **Microarrays** of cells expressing defined cDNAs
SO Nature (London, United Kingdom) (2001), 411(6833), 107-110
CODEN: NATUAS; ISSN: 0028-0836
AU Zlauddin, Junald; **Sabatini, David M.**
AB Genome and expressed sequence tag projects are rapidly cataloging and cloning the genes of higher organisms, including humans. An emerging challenge is to rapidly uncover the functions of genes and to identify gene products with desired properties. We have developed a

microarray-driven gene expression system for the functional anal. of many gene products in parallel. Mammalian cells are cultured on a glass slide printed in defined locations with different DNAs. Cells growing on the printed areas take up the DNA, creating spots of localized transfection within a lawn of non-transfected cells. By printing sets of complementary DNAs cloned in expression vectors, we make **microarrays** whose features are clusters of live cells that express a defined cDNA at each location. Here we demonstrate two uses for our approach: as an alternative to protein **microarrays** for the identification of drug targets, and as an expression cloning system for the discovery of gene products that alter cellular physiol. By screening transfected cell **microarrays** expressing 192 different cDNAs, we identified proteins involved in tyrosine kinase signalling, apoptosis and cell adhesion, and with distinct subcellular distributions.

cell-biological applications.

L14 ANSWER 15 OF 19 MEDLINE on STN
AN 2002139046 MEDLINE
TI High-density **cell microarrays** for parallel functional determinations.
SO Genome research, (2002 Mar) 12 (3) 482-6.
Journal code: 9518021. ISSN: 1088-9051.
AU Xu C Wilson
AB Whole-genome sequencing projects have generated a wealth of gene sequences from a variety of organisms. A major challenge is to rapidly uncover gene regulatory circuits and their functional manifestations at the cellular level. Here we report the coupled fabrication of nanocraters ranging in size from 100 pL to 1.5 nL on permeable membranes for culturing cells. Using this approach, we developed bacterial and yeast **cell microarrays** that allowed phenotypic determinations of gene activities and drug targets on a large scale. **Cell microarrays** will therefore be a particularly useful tool for studying phenotypes of gene activities on a genome-wide scale.

L14 ANSWER 19 OF 19 MEDLINE on STN
AN 2001239530 MEDLINE
TI Microarrays of cells expressing defined cDNAs.
SO Nature, (2001 May 3) 411 (6833) 107-10.
Journal code: 0410462. ISSN: 0028-0836.
AU Ziauddin J; Sabatini D M
AB Genome and expressed sequence tag projects are rapidly cataloguing and cloning the genes of higher organisms, including humans. An emerging challenge is to rapidly uncover the functions of genes and to identify gene products with desired properties. We have developed a microarray-driven gene expression system for the functional analysis of many gene products in parallel. Mammalian cells are cultured on a glass slide printed in defined locations with different DNAs. Cells growing on the printed areas take up the DNA, creating spots of localized transfection within a lawn of non-transfected cells. By printing sets of complementary DNAs cloned in expression vectors, we make microarrays whose features are clusters of live cells that express a defined cDNA at each location. Here we demonstrate two uses for our approach: as an alternative to protein microarrays for the identification of drug targets, and as an expression cloning system for the discovery of gene products that alter cellular physiology. By screening transfected **cell microarrays** expressing 192 different cDNAs, we identified proteins involved in tyrosine kinase signalling, apoptosis and cell adhesion, and with distinct subcellular distributions.

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Privacy Policy

1: Drug Discov Today. 2002 Sep 15;7(18 Suppl):S113-8. Related Articles, Links

Online Full-text

Applications of transfected cell microarrays in high-throughput drug discovery.

Bailey SN, Wu RZ, Sabatini DM.

Whitehead Institute of Biomedical Research, Cambridge, MA 02142, USA.

DNA microarrays and, more recently, protein microarrays, have become important tools for high-throughput genomic and proteomic studies. Transfected cell microarrays are a complementary technique in which array features comprise clusters of cells overexpressing defined cDNAs. Complementary DNAs cloned in expression vectors are printed on microscope slides, which become living arrays after the addition of a lipid transfection reagent and adherent mammalian cells. This article discusses two potential uses of cell microarrays in drug discovery: as a method of screening for gene products involved in biological processes of pharmaceutical interest and as in situ protein microarrays for the development and assessment of leads.

Publication Types:
- Review
- Review, Tutorial

PMID: 12546876 [PubMed - indexed for MEDLINE]

2: Trends Cell Biol. 2002 Oct;12(10):485-8. Related Articles, Links

Online Full-text

Cell-biological applications of transfected-cell microarrays.

Wu RZ, Bailey SN, Sabatini DM.

Whitehead Institute of Biomedical Research, Cambridge, MA 02142, USA.

Cell microarrays are a recent addition to the set of tools available for functional genomic studies. Each cell microarray is a slide with thousands of cell clusters that are each transfected with a defined DNA, which directs either the overproduction or the inhibition of a particular gene product. By using a range of detection assays, the phenotypic consequences of perturbing each gene in mammalian cells can be probed in a systematic, high-throughput fashion. Combining well-established methods for cellular investigation with the miniaturization and multiplexing capabilities of microarrays, cell arrays are a versatile tool that can be useful in many cell-biological applications.

Publication Types:
- Review
- Review Literature

PMID: 12441253 [PubMed - indexed for MEDLINE]

3: Nature. 2001 May 3;411(6833):107-10. Related Articles, Links

nature

Microarrays of cells expressing defined cDNAs.

Ziauddin J, Sabatini DM.

Whitehead Institute for Biomedical Research, Cambridge, MA 02142, USA.

Genome and expressed sequence tag projects are rapidly cataloguing and cloning the genes of higher organisms, including humans. An emerging challenge is to rapidly uncover the functions of genes and to identify gene products with desired properties. We have developed a microarray-driven gene expression system for the functional analysis of many gene products in parallel. Mammalian cells are cultured on a glass slide printed in defined locations with different DNAs. Cells growing on the printed areas take up the DNA, creating spots of localized transfection within a lawn of non-transfected cells. By printing sets of complementary DNAs cloned in expression vectors, we make microarrays whose features are clusters of live cells that express a defined cDNA at each location. Here we demonstrate two uses for our approach: as an alternative to protein microarrays for the identification of drug targets, and as an expression cloning system for the discovery of gene products that alter cellular physiology. By screening transfected cell microarrays expressing 192 different cDNAs, we identified proteins involved in tyrosine kinase signalling, apoptosis and cell adhesion, and with distinct subcellular distributions.

PMID: 11333987 [PubMed - indexed for MEDLINE]
